

MEMORANDUM

To: PSB Docket No. 5980 Service List
Beth Sachs, Vermont Energy Investment Corporation
Act 61 EEU E-mail Service List

From: James A. Volz, Chairman
David C. Coen, Board Member
John D. Burke, Board Member

Re: Adoption of Revised Avoided Costs

Date: November 21, 2006

In Docket 5980, the Vermont Public Service Board ("Board") approved avoided costs for use in energy efficiency programs run by the energy efficiency utility ("EEU"). We also accepted the parties' proposal (as set out in the Memorandum of Understanding ("MOU") between the Vermont Department of Public Service ("Department") and other parties) establishing a process for later revisions of those avoided costs. Specifically, paragraph 11 of the MOU provides (in relevant part) that:

The DPS also will update avoided costs used in EEU program and measure screening and estimates of economically achievable energy efficiency potential as appropriate. Such updates shall be filed with and approved by the Board after an opportunity for other parties to file written comments and request a technical workshop. The Department intends to perform such updates as part of its core functions to the extent reasonably feasible.¹

On May 4, 2006, the Department requested that the Board approve updated avoided costs for use in program and measure screening by the EEU. Consistent with the process we adopted in Docket 5980, the Board solicited comments from interested persons and conducted a technical workshop on August 25, 2006, to review the Department's analysis. We also asked interested persons to address several specific substantive issues, including (1) which costs the Board should adopt, (2) whether the potential range of variation in

¹Docket 5980, Order of 9/30/99, Appendix A at A-9 (¶ 11).

forecasts should raise concerns, (3) which costing period methodology the Board should adopt, and (4) whether the avoided costs could be used for other purposes.

We have considered the Department's proposal, the comments thereon,² and the parties' statements at the workshop. As we explain below, we find the proposal to be reasonable and accept the Department's recommended avoided costs for use in program and measure screening only.

Avoided Costs

The proposed avoided costs were developed by the Avoided-Energy-Supply-Component ("AESC") Study Group in conjunction with other states in the New England region.³ As the Department points out in its comments, the regional group has historically updated these costs biannually and plans to continue this practice. The cost projections that the Department asks us to adopt were customized for Vermont based upon the regional avoided cost analysis.

The Department advocates that we adopt the avoided energy costs for Vermont, but only the capacity and energy values. These are set out on page 188 of the report (in columns 1 through 7). In addition, the Department recommends that we adopt end use avoided costs for natural gas and other fuels as set out in the AESC report. The Department proposes no change to the externality values or risk adjustment. The Department also does not propose to adopt the DRIPE (Demand Reduction Induced Price Effects) adjustment, although it states that it will continue to refine the DRIPE concept.

At this time, the Department has not proposed revisions to the existing avoided transmission and distribution ("T&D") costs. The Department states that it is still analyzing the methodology set out in the AESC and adapting it to Vermont.

VPIRG/CLF recommends that we adopt the avoided costs set out in the AESC study. VPIRG/CLF state that the avoided costs represent a significant improvement. GMP and CVPS also recommend that we adopt the energy and generation capacity costs, but that we do not include the DRIPE adjustment. GMP and CVPS also recommend further work on the T&D avoided costs.

We accept the Department's recommendation and adopt the avoided energy and capacity costs, as well as the end use avoided costs for natural gas and other fuels. (A copy of these avoided capacity and energy costs is attached. The avoided natural gas costs are located in Chapter 1, Exhibit 1-20 of the AESC report. The costs for other fossil fuels are contained in Exhibits 4.2 through 4.8 of Chapter 4.)

²We received written comments from the Department, Green Mountain Power Corporation ("GMP"), Central Vermont Public Service Corporation ("CVPS"), and joint comments from the Vermont Public Interest Research Group and Conservation Law Foundation ("VPIRG/CLF")

³The AESC study, prepared by ICF Consulting, is entitled "Avoided Energy Supply Costs in New England" and is available on the Department's web site at: <http://publicservice.vermont.gov/pub/aescstudy.html>.

At this time, we do not adopt the DRIPE adjustment. We also do not adopt new avoided costs for T&D as we have no proposal before us.

Variability

The avoided costs that we adopt are based upon projections of the market price for electricity, natural gas, and other fossil fuels over a period of time. During the workshop, a number of questions arose related to changes in oil prices and other assumptions that underlie these projections and the potential affect of these variations on the usefulness of the avoided costs.

The Department commented that even large oil price adjustments (approximately 20 percent) only have a 5 percent effect upon gas prices and even less impact on electric prices. The Department states that variability risks should not cause the Board to delay adoption of the recommended avoided costs. CVPS and GMP do not raise concerns about the variability in the current study. However, they each suggest that including a range of results or scenarios may be useful.

We recognize that there exists the potential for some variability in the fuel price and, therefore, the market-price forecasts. The Department has shown that this variability does not now have a significant impact on the long-term price forecasts and, more significantly, on the likely results of measure and program screening. In future studies, the Department should consider how and if to incorporate a range of different assumptions as a means to test the validity of the base case and its sensitivity to changed assumptions.

Costing Periods

The AESC report uses costing period definitions that are different from the current costing periods. In addition, ISO New England has designated costing periods for demand reductions associated with demand resources for the forward capacity market ("FCM"); these costing periods match neither the ones the EEU now uses or the periods in the AESC report. The Department states that its goal is to avoid reworking DSM savings data twice to accommodate evolving market requirements. To that end, the Department recommends that we adopt the recommendations in the AESC report. But the Department also proposes that the EEU create "a capacity value consistent with the ISO FCM performance hours for use as the DSM capacity value." If this is not possible, the Department recommends using the ISO capacity definitions for the short term.

CVPS and GMP each recommend adopting the ISO's costing periods. CVPS points out that this will better align the EEU valuations with ISO capacity payments for efficiency resources. GMP asserts that it would be confusing and unnecessary to adopt two standards.

At this time, we accept the Department's recommendation to employ the costing period definitions set out in the AESC report (at p. 148) for energy. This will assure that both the costs and costing periods will be consistent, since these costing periods were used in the calculation of the avoided costs. We also adopt the recommendation of the Department and other commenters that we use the ISO's costing periods and methodology for capacity.

Other Uses of Avoided Costs

The final issue we raised was the degree that these avoided costs could or should be used for other purposes. Several persons at the workshop suggested that it may be appropriate to adopt the avoided costs for purposes of Rule 4.100, allowing prospective small power producers to use the forecasted costs as long-term prices for power.

The Department, in its proposal, recommends their use only for screening of demand-side management. The Department also observed that if anyone seeks to use them for another purpose, the proponent must justify their use. CVPS, GMP, and VPIRG/CLF also propose that the Board should adopt them solely for EEU purposes.

At this time, the avoided costs we adopt today are for use solely in the EEU's program and measure screening. No party has shown that it is appropriate to use them for other purposes. In reaching this conclusion, we do not preclude a person or company from seeking to use the avoided costs (and, more specifically, the price forecasts) for other purposes in the future. It is possible that they would represent a reasonable forecast of long-range market prices and thereby provide a reasonable benchmark. A party seeking to use them, however, will need to demonstrate that the intended use is appropriate, particularly in light of the passage of time.

Finally, we make clear that we do not adopt the avoided costs for purposes of long-term rates under Rule 4.100. No one has demonstrated that these particular price forecasts are appropriate for such use. Moreover, since the establishment of the small power program under Rule 4.100, the legislature has enacted the Sustainably Priced Energy Enterprise Development ("SPEED") program under Sections 8001–8005 of Title 30 to encourage the development of renewable energy resources — the same type of power resource that would have previously fallen under the Rule 4.100 program. With the possible exception of circumstances in which a developer seeks to use the short-term small power rates, the SPEED program will be the preferred mechanism for renewable resources.

Future Revisions to Avoided Costs

The Department states that it expects to update the avoided costs on a regular basis in the future. It observes that the AESC report is the product of a regional effort that will produce new analyses every two years. VPIRG/CLF recommend that the avoided costs be updated every two years. VPIRG/CLF also state that future avoided cost revisions should account for DRIPE. Finally, VPIRG/CLF contend that future cost analyses should avoid what they characterize as biased assumptions.

We agree with both the Department and VPIRG/CLF that more frequent updating of the avoided costs is reasonable. It has been more than six years since we adopted the Docket 5980 avoided costs; much has changed since that time. We do not now explicitly require that the Department present such an analysis biannually, although this appears to be a reasonable interval.

We also do not mandate that future avoided cost calculations include DRIPE. Instead, we encourage the Department to reexamine the appropriateness of including this adjustment in future avoided costs. We will evaluate this issue more as part of the next avoided cost filing.

Finally, we do not now address the potential "biased" assumptions referred to by VPIRG/CLF. Quite clearly, the assumptions that are employed in any market price analysis will have a profound affect on the outcome. It appears that, in part due to timing, some of the assumptions in the AESC study may not be reasonable. It is not clear, however, what steps we can now take to assure that future studies do not include what may be, in the future, unreasonable assumptions. Instead, this issue is more appropriately examined at the time we are requested to adopt new avoided costs based upon an updated study.